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## REMARKS

Applicants respectfully request reconsideration of the present application based on the foregoing amendments and the following remarks. In the Office Action Claims 1-7 and 10-28 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,708,137 to Carley ("Carley") in view of U.S. Publication No. 2004/0196862 A1, which is a patent application by Song et al. ("Song"). Applicants respectfully traverse the rejections. By this amendment, claims 1, 14, 19, 23, 25 and 27 have been amended and claims 29-37 are newly submitted. Upon entry of the amendment, claims 1-37 are pending in the application.

### *Allowable Subject Matter*

Applicants initially thank the Examiner for acknowledging the allowable subject matter in the claims. In this Amendment, newly added claims 33-37 depend from claim 8 and, for at least the reason that independent claim 8 is allowable, Applicants believe that claims 33-37 are also allowable. Therefore, Applicants request allowance of the claims 33-37.

### *Rejections of the Claims*

Regarding claims 1, 11-14, 16, 19, 21, 23, 25 and 27, the rejections rely on an interpretation of a "time range" in Carley as teaching "system time" required in the claims. However, Carley is directed to a data collection agent that is a computer that resides on an information network (*see* Carley col. 1, lines 7-36 and col. 4, lines 38-65). Carley merely teaches that a user requesting a statistical report can input a time range for which previously collected data may be retrieved and processed (*see* Carley at col. 5, lines 21-52). Carley teaches statistical methods for processing network data and does not disclose, teach or suggest methods for data transfer in an Optical Network.

In contrast, aspects of the present invention resolve problems associated with optical networks including limitations of optical access systems that comply with one or more of ITU-T Recommendations G.983.1 (*see* Background at paragraph [00014]). Carley is silent regarding optical networks, optical network units ("ONUs"), optical line terminations ("OLTs") and collecting data in optical networks. Consequently it cannot reasonably be said that Carley teaches or suggests an OLT system time as taught in the present Application (*see, e.g.,* paragraph

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[00038]). Therefore, Applicants respectfully submit that the time range specified by Carley provides an insufficient basis for rejecting the claims of the present Application. Applicants further submit that one of ordinary skill in the art would not have looked to Carley to resolve problems associated with collecting network data in optical networks comprising ONUs and OLTs. For at least these reasons, Applicants respectfully submit that the rejections of the claims are improper.

Nevertheless, Applicants have amended the claims to further distinguish certain aspects of the invention from the art of record, particularly in relation to OLT system time. For example, amended claims 1 and 27 require, *inter alia*, synchronizing one or more counters to a system time maintained at an OLT and the collection of network data in intervals based on the system time. Carley merely teaches that a user can request a report of previously collected data for a specified time of interest (Carley at col. 5, lines 30-48). Nowhere does Carley teach an OLT or a system time maintained on an OLT that synchronizes counters or network data collection activity. Consequently, Carley's time range cannot be said to teach or suggest a system time upon which the collection of portions of network data is based.

Amended claim 14 requires, *inter alia*, associating portions of the network data with corresponding time intervals at an ONU, wherein the time intervals are synchronized to an OLT system time. Carley's time range is provided after data has been collected and, for at least the reasons presented *supra*, Carley does not teach or suggest both the recited time intervals and the OLT system time or the required synchronization of the time intervals and system time.

Amended claim 19 requires, *inter alia*, network data that are collected in a plurality of time intervals, and an indication of current system time for synchronizing each of the plurality of time intervals to the current system time. Since Carley teaches only a time range for specifying previously connected data the reference cannot be said to teach or suggest synchronizing the recited time intervals a system time.

As amended claim 23 requires, *inter alia*, counters synchronized to an OLT system time and a data collector configured to collect network data associated with time intervals synchronized to with the OLT system time. Carley's time range cannot reasonably be interpreted as an OLT system time and time intervals and Carley does not teach or suggest synchronization of time intervals, particularly to an OLT system time.

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As amended claim 25 requires, *inter alia*, maintaining an OLT system time at an OLT and the collection of network data and associating the network data with the OLT system time at an ONU. Carley does not teach or suggest an OLT, an OLT system time or the association of collected data at an ONU with OLT system time.

Recognizing that Carley does not teach or suggest one or more counters synchronized to the current system time, the Office Action proposes that Song supplies this and other elements missing from Carley. Applicants disagree and respectfully submit that Song does not cure the deficiencies of Carley and, Applicants further submit that one of ordinary skill in the art would not have been motivated to combine Song with Carley.

Song does not teach or suggest one or more counters in an ONU that are synchronized to a system time maintained by an OLT as required by claim 1. Song is silent regarding counters. At most, Song makes a single reference to a timer, but the timer merely "measure[s] the time required for the data transmission" (*see* Song at paragraph [0030]). Song provides no teaching or suggestion that permits this timer to be construed as a counter in an ONU that is synchronized to a system time maintained by an OLT as required by claim 1

Nevertheless, the Office Action proposes that the transmission time measured in Song renders obvious an indication of system time, and that a comparison of measured transmission time to a predetermined normal transmission time teaches, suggests or otherwise renders obvious an indication of system time, synchronizing with current system time and intervals synchronized with current system time (Office Action at Page 3, first paragraph). Applicants respectfully submit that this interpretation of Song's transmission time is clearly erroneous and improper because it is not supported by the Song disclosure. In Song, measured transmission time and normal transmission time are described as follows:

> To this end, according to the teachings of the present invention, if each ONU 110 starts to transmit data to the OLT 100 in the upstream direction, a measurement of the time required to transmit the data is measured, and, if the measured time exceeds a predetermined normal transmission time, the data transmission is stopped. Here, the normal transmission time is the time required for the ONU 110 to transmit the maximum amount of data transmittable at a given time when it occupies a transmission line to the OLT 100. Note that OLT assigns the transmission time to each ONU in the GE-PON protocol

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(Song at paragraph [0024]). Thus, the transmission times discussed in Song merely allow a determination of whether a transmission was successful based on whether the duration of transmission exceeds a predetermined threshold value. Simply put, if the ONU in Song does not complete transmission in the allotted time, transmission is terminated. Applicants respectfully submit that an ordinarily skilled artisan would not have read this Song teaching of error detection as suggesting synchronization with a system time maintained at an OLT.

Furthermore, nothing in Song, teaches or suggests a system time maintained at the OLT, synchronizing counters or synchronizing collection of data and the words "system," "synchronize" and "synchronous" cannot be found anywhere in Song. Song explicitly teaches that the predetermined normal transmission time is provided in the Gigabit Ethernet passive optical network ("GE-PON") protocol. Applicants respectfully submit that such a constant, "predetermined normal transmission time" could not have been construed as teaching a system time maintained at an OLT to which system time counters and data collection is synchronized. Therefore, Applicants respectfully submit that an explicit teaching of the use of a standards defined **constant** as a threshold cannot be construed as the system time that is maintained in an OLT recited in the claims of the present Application.

Finally, an ordinarily skilled artisan would not have been motivated to combine Carley with Song. Carley is directed to a method for statistical analysis of network performance (Carley Abstract). Song teaches a method of transmission control in a TDMA system (Song Abstract). The two references address no common problem. Carley is unconcerned with optical network operations and Song is concerned only with avoiding collisions in optical networks by timing transmission of data blocks (see Song Related Art and Summary). This incongruity is reflected in the classification of the references in the U.S. Patent Office: Carley is classified in patent classification 702/179 relating to data processing and, in particular, to statistical measurement; Song is classified in Class 370/442 relating to "Combining or distributing information via time channels using multiple access techniques." Therefore, Applicants respectfully submit that one of ordinary skill in the art would have had no motivation to combine the references.

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All objections and rejections having been addressed, and in view of the foregoing, the claims are believed to be in form for allowance, and such action is hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,
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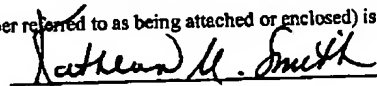

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